

National Aeronautics and
Space Administration




JANUARY 2017

SPACE LAUNCH SYSTEM HIGHLIGHTS

MAJOR CONSTRUCTION COMPLETE ON SLS TEST STAND

CONSTRUCTION COMPLETE: STAND PREPARES TO TEST SLS'S LARGEST FUEL TANK

Major construction is complete on NASA's largest new SLS structural test stand, and engineers are now installing equipment needed to test the rocket's biggest fuel tank. The stand is critical for ensuring SLS's liquid hydrogen tank can withstand the extreme forces of launch and ascent on its first flight, and later on the second flight, which will carry up to four astronauts in the Orion spacecraft on a journey around the moon, into the deep-space proving ground for the technology needed for the journey to Mars.

A photograph showing two engineers, a woman on the left and a man on the right, both wearing white hard hats. They are looking at a large set of blueprints held by the woman. In the background, there is a large, complex control panel with many gauges, dials, and switches. The setting appears to be an industrial or laboratory environment.

Pictured, engineer Tara Marshall, left, talks about the installation of a pressurization control panel at Test Stand 4693 with Mike Nichols, lead test engineer for the SLS liquid hydrogen tank structural test article. Over the coming weeks, engineers are installing networks of cables, pipes, valves, control systems, cameras, lighting and special equipment to prepare for testing.

Full story here: bit.ly/2i9rGje

EXPLORATION UPPER STAGE (EUS) PASSES MAJOR REVIEW

NASA has successfully completed the exploration upper stage preliminary design review for the Space Launch System rocket. The detailed assessment is a big step forward in being ready for more capable human and robotic missions to deep space, including the first crewed flight of SLS and NASA's Orion spacecraft in 2021.

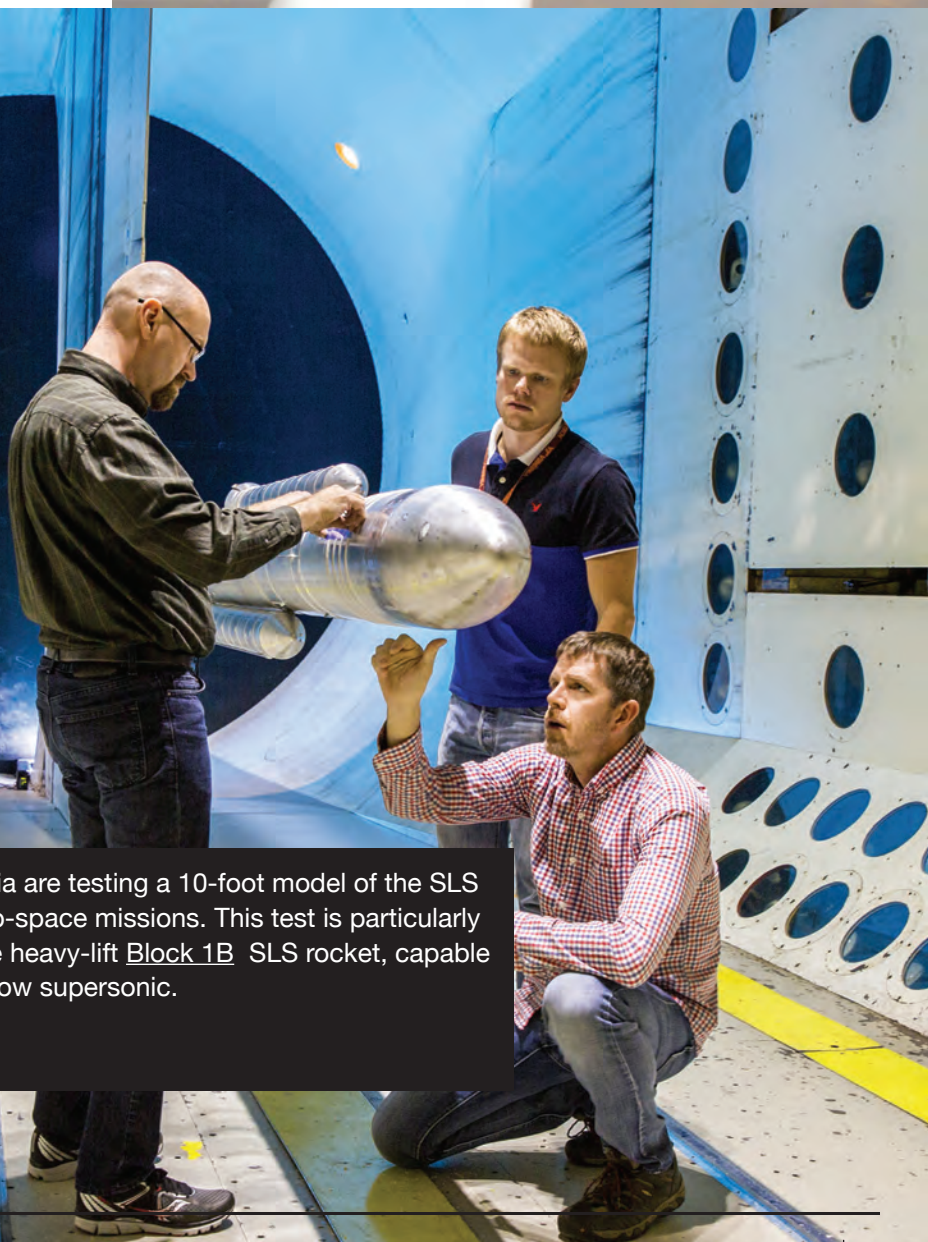
Read the full story – and see animation of the EUS in flight – here: bit.ly/2jytNRz



SLS SHOCKED DURING WIND TUNNEL TESTING TO BETTER UNDERSTAND ROCKET'S TRANSONIC BEHAVIOR

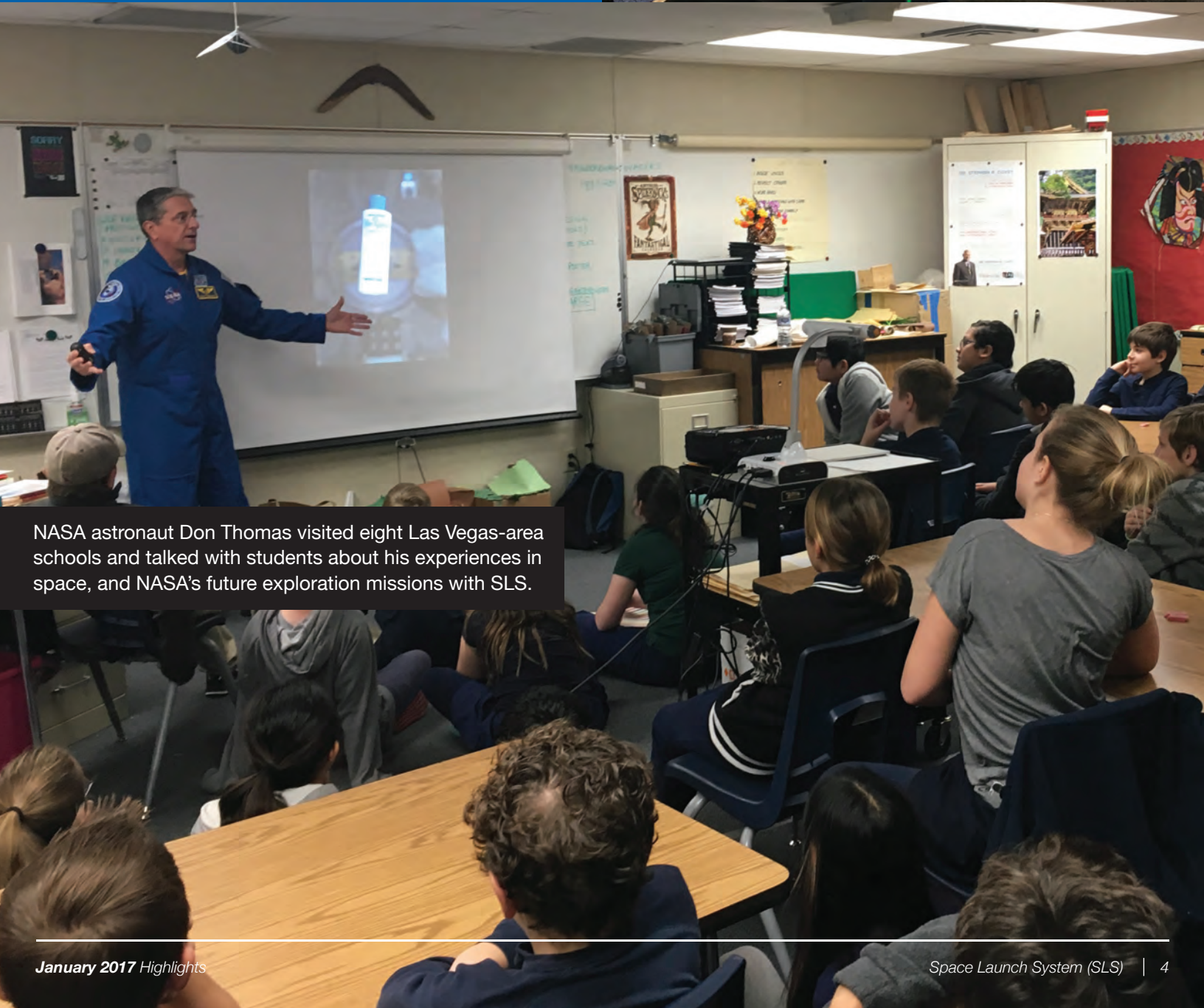
Engineers at NASA's Langley Research Center in Virginia are testing a 10-foot model of the SLS to understand how the rocket may perform during deep-space missions. This test is particularly focused on understanding how the cargo version of the heavy-lift Block 1B SLS rocket, capable of lifting 105 metric tons, will behave at speeds just below supersonic.

Read the full story here: bit.ly/2hPwnSg



SLS GOES TO NEVADA

More than 15,000 people got to learn more about the world's most powerful rocket and take part in some really cool NASA interactive exhibits at the Consumer Electronics Show in Las Vegas, Nevada. Here, a CES guest takes a virtual tour of the launchpad where SLS will lift off with **NASA's Orion Spacecraft** in 2018.



NASA astronaut Don Thomas visited eight Las Vegas-area schools and talked with students about his experiences in space, and NASA's future exploration missions with SLS.



I am *building* SLS

Renee Horton
SLS Metals and Weld Engineer

I AM BUILDING SLS: RENEE HORTON

This NASA engineer is “making history every day” on the rocket for the journey to Mars.

Meet Renee Horton: bit.ly/2ja2pql

SPACEFLIGHT PARTNERS: *Technetics Group Deland*

Technetics provides Boeing with Naflex seals for SLS liquid hydrogen and liquid oxygen propellant bolted joints. The seals ensure the integrity of critical fluid connections during the stress of launch. The seals experience the extremes of high and low temperatures during the mission.



HIDDEN FIGURES TO MODERN FIGURES: STUDENTS SEE SLS ROCKET AT MICHLOUD



What do these students have in common with NASA's past?

Hidden Figures To Modern Figures: Students See SLS Rocket at Michoud



Published on Jan 9, 2017

New Orleans teacher Katherine Michelle Sanders of St. Peter Claver School, takes her 7th grade science on a tour of nearby NASA's Michoud Assembly Facility to see where the Space Launch System - the world's most powerful rocket - is being built

New Orleans teacher Katherine Michelle Sanders – of St. Peter Claver School – takes her seventh-grade science class on a tour of NASA's Michoud Assembly Facility to see where the SLS core stage is being built. Sanders is the granddaughter of famed NASA scientist Katherine Johnson, who was featured in the book and movie, "Hidden Figures."

Watch the video here: bit.ly/2jU7yq3

NASA ADMINISTRATOR BOLDEN'S FINAL VISIT TO MICHLOUD



NASA Administrator Charles Bolden saw the liquid hydrogen tank that will be used for the first SLS flight when he visited NASA's Michoud Assembly Facility in New Orleans. The trip marked Bolden's last visit to Michoud before his eight-year tenure as NASA administrator ended Jan. 20.

Details about the visit in the Michoud Messenger:
bit.ly/2k0oyuJ

FOLLOW THE PROGRESS OF NASA'S NEW LAUNCH VEHICLE FOR DEEP SPACE:

NASA SLS Blog blogs.nasa.gov/Rocketology

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COMING UP:

RS-25 engine testing

Suppliers' conference

Start of SLS structural testing at MSFC